REMARKS

Claims 1-12 remain pending in the above-referenced application.

Claims 1-12 stand rejected under 35 U.S.C. §(b) as being anticipated by United States Patent No. 4,790,606 to Reinecke, or DE 10142039 TO Schmidt, or United States Patent No. 6,460,941 to Zenzen. According to independent claims 1 and 7, the present invention describes a method and a device for monitoring and controlling the braking system of a vehicle. In this context, an (actual) braking variable is recorded which represents the deceleration of at least one wheel brake. If the vehicle is in a prespecified driving situation, and/or if a critical operating state is detected in a vehicle component located in the vehicle, the recorded braking variable is compared to at least one predefined threshold value. Of course, it may also be provided that the comparison may also be carried out before the recording of the prespecified driving situation or the critical operating state of the vehicle component. As a function of this comparison, subsequently, during a braking procedure, a measure may be introduced which changes the deceleration at at least one wheel brake, without substantially changing the overall deceleration of the vehicle.

A device for measuring a braking torque is known from Reinecke, which is transferred from a braking device to a deceleratable element. In this context, one assumes that, between the transferred braking torque and the temperature created in the process at the decelerating element there is a definite plan in accordance with theoretical principles (page 3 of '082, lines 25 to 32 and page 12, lines 13 to 18) (citations are to counterpart EP 0189082). The temperature monitoring, using a temperature-dependent measuring element in the form of a temperature sensor, may be embedded in the monitored component or in its material (among other places, page 4, lines 14 to 28). As a function of the recorded temperature signal, the braking torque control device may control the braking torque in such a way that a greatest admissible temperature at the braking unit is not exceeded (page 6, lines 22 to 27 and page 10, lines 19 to 30).

However, using the temperature of the decelerating element or the braking torque control device to ascertain the braking torque is problematical, as document '082 also points out. Thus, at the temperature sensor, at a given braking torque, a higher temperature sets in if the brake lining is more severely worn and has consequently become thinner. As a remedy, Reinecke uses an adjustment of the measured values via characteristics maps (page 12, lines 18 to 27). However, such an adjustment does not reflect the actual wear of the brake lining because of the mechanical/physical relationship between operating force and operating

path. Rather, these characteristics maps prognosticate the wear at an average usage of the brake. Also, inaccuracies, caused by response resistances, hystereses and other common properties which are taken into consideration when recording the actual value of the braking torque, have not been taken into account in the subject matter of Reinecke (page 15, lines 30 to 34). Therefore, one cannot derive from Reinecke that the subject matter described there records the real (actual) retarding force.

A method for controlling the braking pressure characteristic in the rear brakes of a vehicle braking system is known from Zenzer. In this context, the increase in the braking pressure in the rear wheel brakes is admitted after the setting in of an EBV control upon detecting brake fading. To detect the brake fading, a counter is incremented which depends on the operation of the brake pedal or a deceleration within a prespecified time (column 4, lines 14 to 25). Moreover, to detect the brake fading, a temperature model may be used for calculating the temperature of the brake disks (column 5, lines 5 to 12). Consequently, it becomes clear that Zenzer, in contrast to the present invention, uses no variable, for a comparison, which represents the actual retarding force or the actual deceleration at a wheel. Furthermore, the overall deceleration of the vehicle is not explicitly taken into consideration.

A method for detecting a misoperation of a braking system is known from document Schmidt. In this context, during the simultaneous operation of the gas pedal and the brake pedal by the driver, one of the operating signals is conceded precedence over the other operating signal in such a way that a setpoint signal, assigned to the lower-ranking operating signal, in relation to the operating command, is due a reduced, or no, or an opposite effect (column 1 of Schmidt, lines 29 to 37). Consequently, according to Schmidt, the (setpoint) braking command of the driver is recorded, to be sure, but, in response to the simultaneous operation of the gas pedal is not carried out or is at best only partially carried out.

In the present invention, on the other hand, independently of the driver, an actual value is recorded of the braking variable that is compared to a prespecified threshold value. If there is, at the same time, a prespecified driving situation and/or a prespecified operating state of a vehicle component, it is recorded whether there is a braking procedure present before suitable measures are initiated. The braking procedure, in this context, may be initiated dependent upon the driver or also independent of the driver, for instance, by an automatic braking system. What is recited in the present invention is also that the effect of the modification of the deceleration at the at least one wheel brake acts almost neutrally on the overall deceleration. Such an embodiment cannot be inferred from Schmidt.

It is respectfully submitted that the subject matter of the present application is new, non-obvious, and useful. Prompt consideration and allowance of the application are respectfully requested.

Respectfully submitted,

By: [signature] R.No. 41,174

Dated: 11/15/05

By: [signature]
Gerard A. Messina
Reg. No. 35,952

KENYON & KENYON
One Broadway
New York, NY 10004
(212) 425-7200